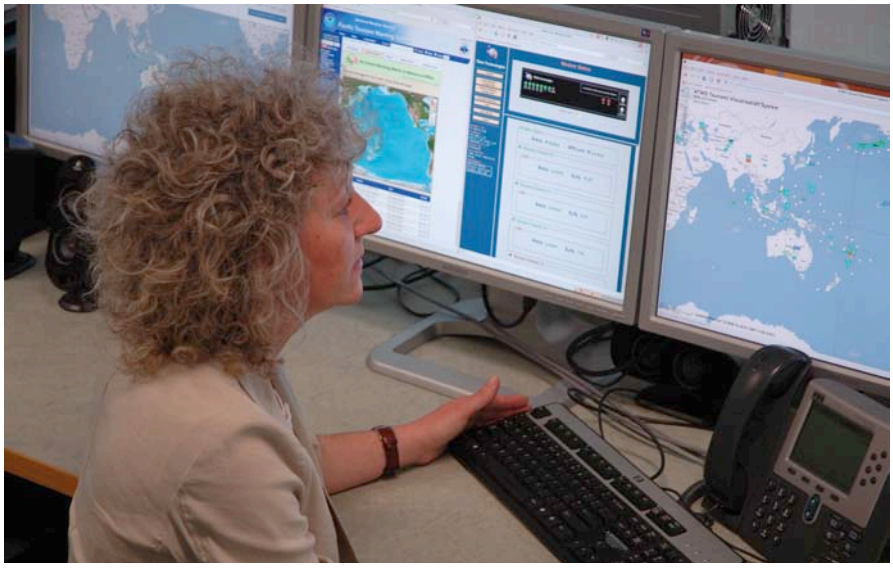
Joint Australian
Tsunami Warning Centre

The Joint Australian Tsunami Warning Centre (JATWC) is operated by the Bureau of Meteorology (Bureau) and Geoscience Australia (GA). Based in Melbourne and Canberra, it has been established so that Australia has an independant capability to detect, monitor, verify and warn the community of the existence of tsunami in our region and possible threats to Australian coastal locations and offshore islands.

The Bureau and GA are building on their combined expertise in the relevant science and technology areas including seismic and sea level monitoring and warning systems to provide a 24/7 tsunami monitoring and analysis capacity for Australia. Previously, Australia relied on the Pacific Tsunami Warning Centre (PTWC) and the Japan Meteorological Agency (JMA) for more limited tsunami information to interpret for Australia and feed into the earlier Australian Tsunami Alert System (ATAS).

The centre boasts world class scientific technology with the expressed aim of providing the longest lead time of any potential tsunami threat. The major objective of the JATWC is to provide emergency managers with a minimum of 90 minutes warning of a likely tsunami impact on Australia. The centre is a long term investment in Australia's security and has the real potential to save lives and infrastructure.

Australian Government
Bureau of Meteorology
Geoscience Australia



Expert staff provide early detection and warning for potentially dangerous tsunami.

The JATWC is the core component of the Australian Tsunami Warning System (ATWS), which has additional contributions from Emergency Management Australia (EMA) through its role in public education and support for State emergency service organisations; and the Australian Agency for International Development (AusAID) for support of our neighbouring countries in the Indian Ocean and the South-West Pacific.

Roles in the JATWC

GA's role in the JATWC is two-fold: Firstly, it is to detect potentially tsunamigenic earthquakes in the Indian Ocean, Pacific Ocean and Southern Ocean, and advise the Bureau of this potential within 15 minutes of the earthquake occurring. Secondly, it undertakes tsunami risk studies to assist local and State organisations in planning for tsunami events.

The Bureau's role is also two-fold: Firstly, to use its network of sea-level monitoring equipment including coastal sea-level gauges and DART™ buoys (deep-ocean tsunami detection

Detection of undersea earthquakes.

buoys) and tsunami computer models to confirm the existence of a tsunami and estimate its likely intensity at the Australian coast. The second part of the Bureau's role is to issue the relevant tsunami warnings and bulletins for Australia (including islands and territories) as required.

The two organisations work hand-in-hand during events to share scientific knowledge and examine the strength of the tsunami before threats and warnings are issued.

What does the JATWC do?

GA receives real-time data from over 50 seismic stations in Australia, and more than 120 international seismic

Deep-ocean tsunami detection buoy.

stations. GA is currently upgrading and expanding the existing network of seismic stations in Australia as part of the ATWS program to extend Australia's sources of seismic data.

The seismic data are then analysed by specifically designed automatic systems that form part of GA's established 24/7 operations centre. Expert seismologists use the results of the automated process to make a final analysis of the potential for the detected earthquakes to cause a tsunami.

Also feeding into the centre are the data from the Bureau's sea level observations. Highly sensitive instruments provide real time sea level observations that can verify whether an earthquake has generated a tsunami as well as monitoring its path. The data are provided by coastal sea level stations and deep-ocean tsunami detection buoys. Equipped with sea level data and the Bureau's scientific modelling, specially trained staff at the Bureau then issue a warning that is in keeping with the threat level. Previously, the tsunami warnings were issued for entire states. The JATWC is now leading the world by providing warnings that identify not only affected coastal regions, but also whether the tsunami threat is to land or marine areas.

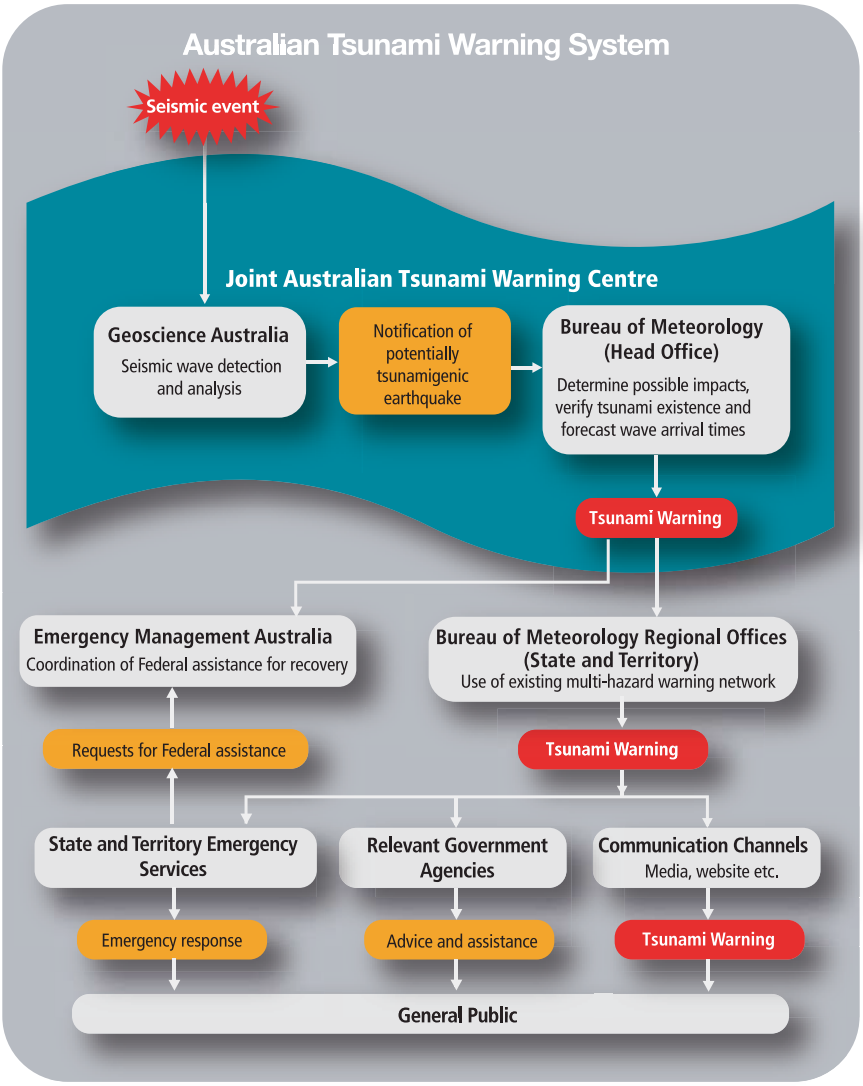
The Bureau will issue advice and warnings on any identified tsunami threat to emergency management agencies and the public using procedures similar to those used for warnings of other severe weather or hazardous events.

Distribution of Tsunami Bulletins and Warnings to the Media and Public

Media organisations across Australia work with the Bureau to inform the public in the case of a tsunami event. Tsunami bulletin and warning distribution lists are maintained at each of the Bureau's State and Territory Regional Forecasting Centres. These distribution lists are used for both National JATWC Bulletins and Regional Warnings. In addition to the media, key agencies such as the State and Territory emergency services, local councils, port authorities, and police are included on these dissemination lists. The bulletin and warning messages are also automatically uploaded to the Bureau of Meteorology's website.

The Australian Tsunami Warning System and International Cooperation

The JATWC is a key component in the establishment of the fully functional ATWS, a four-year project funded by the Federal Government that is due to be completed in June 2009. At the completion of the project Australia will have: improved earthquake and tsunami detection equipment in Australia and around the region; better scientific modelling of tsunami; a responsive warning system; and increased public awareness and community preparedness. The JATWC joins a network of international tsunami watch centres that cooperate under arrangements coordinated by the UNESCO Intergovernmental Oceanographic Commission (IOC).



For further and latest information on tsunami warnings please see
www.bom.gov.au
or call 1300 TSUNAMI (1300 878 6264)

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